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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/717,421	11/19/2003	Suan Jeung Boon	2269-5660US (02-1391.00/U)	7753
24247	7590	06/30/2006	EXAMINER MITCHELL, JAMES M	
TRASK BRITT P.O. BOX 2550 SALT LAKE CITY, UT 84110			ART UNIT 2813	PAPER NUMBER

DATE MAILED: 06/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/717,421

Applicant(s)

BOON ET AL.

Examiner

James M. Mitchell

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 11 January 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-37 and 65-103 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-37 and 69-103 is/are allowed.
- 6) ☒ Claim(s) 65-68 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)       |
| Paper No(s)/Mail Date <u>11/19/03, 5/3/04</u> .  | 6) <input checked="" type="checkbox"/> Other: <u>IDS cont. 1/14/05, 11/14/05.</u> |

## DETAILED ACTION

This office action is in response to applicant's amendment filed January 11, 2006.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 65-68 are rejected under 35 U.S.C. 102(e) as being anticipated by Badehi (U.S. 2003/0080398).

Badehi (Fig. 2A-C; 3C-F; 5A-E) discloses:

(cl. 65) orienting the chip-scale package (e.g. item 92), adjacent to the another semiconductor device component (e.g. 90), the chip-scale package including a plurality of contacts (16) corresponding to a plurality of contacts of the semiconductor device component, at least some contacts of said the plurality of contacts of the chip-scale package including at least sections on an outer periphery of the chip-scale package (Fig. 1) that extend along an entire height of the outer periphery of the chip-scale package<sup>1</sup>; and disposing intermediate conductive elements (84) between at least some contacts of

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<sup>1</sup> The contacts extend along an entire height of the package by covering both the lower and top portion of package. See also Fig. 2B.

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said the plurality of contacts of the chip-scale package and corresponding contacts of said the plurality of contacts of the semiconductor device component (Fig. 2C); (cl. 66) contacts of another device (90) are exposed beyond the outer periphery of the chip scale package (e.g. narrow/lower portion of item 92); (cl. 67, 68) with corresponding contacts of the another semiconductor device component are located beneath the chip-scale package and said-disposing comprises disposing said the intermediate conductive elements (84) between lower sections of said the at least some contacts extending over portions of a back side of the chip-scale package and said the corresponding contacts (Fig. 2C).

***Allowable Subject Matter***

Claims 1-37 and 69-103 are allowed.

***Response to Arguments***

With respect to claims 65-67, applicant's arguments filed January 6, 2006 have been fully considered but they are not persuasive.<sup>2</sup> Applicant contends that the prior art does not show contacts extending an entire height of package. Examiner disagrees, see footnote 1. With respect to claim 66, applicant contends that that the prior art does not show contacts of another semiconductor device are exposed beyond the outer periphery of a chip scale package. Examiner disagrees. Because for example Fig. 2C clearly shows the bottom package, 90, with contacts exposed beyond the outer

periphery of the top chip package, 92, it is within the scope of applicant's claim. As such, applicant's arguments are found unpersuasive.

***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James M. Mitchell whose telephone number is (571) 272-1931. The examiner can normally be reached on M-F 8:00-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carl Whitehead Jr. can be reached on (571) 272-1702. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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<sup>2</sup> The other claims and arguments that the sacrificial layer of Badehi did not face the backside of its device was found persuasive.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Jmm

June 26, 2006

  
CARL WHITEHEAD, JR.  
SUPERVISORY PATENT EXAMINER  
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